

## **REMARKS**

In the Final Office Action, the Examiner suggested that claim 1 is anticipated by DE 19848172 and also rejected claim 1 as allegedly being unpatentable over DE 19848172 in view of Carlson (US 5,454,061) and DuPont's Hytrel® document.

5        The Examiner argues that DE 19848172 discloses a conduit wherein "said overlapping edge meets or substantially meets said under lapping ribbon at an edge of said bead" as claimed (or at least is does after the rolling process which is not specifically excluded by the pending claims).

Applicants submit that the Examiner has misinterpreted exactly what was intended by the  
10 claim language, which Applicants concede may have been somewhat confusing. Therefore,  
Applicants have amended claim 1 to more clearly distinguish the claimed invention by more  
precisely reciting the characteristics and configuration of the overlapping portion. In particular,  
Applicants have clarified the distinction between the "lateral edges" of the ribbon, and the  
"overlapping portion" of the ribbon as described in paragraph [0057] of the original application  
15 (published as US 2004/0081784). In this respect, amended claim 1 reverts back to a claim  
similar to that originally filed, where the overlapping portion meets the edge of the under lapping  
portion.

The claimed configuration ensures that the wall thickness of the conduit (between the  
reinforcing bead) is predominantly only one layer thick, which is important to maintain the  
20 optimally low weight and high flexibility desirable for breathing conduit products. These  
advantages are described in the Summary of the Prior Art.

To aid with the clarification, Applicants have amended paragraph [0057] to include

reference numerals 45 and 46 to identify the “leading” and “trailing” lateral edges as originally described. Applicants also submit new Figures 2 and 3 which include numerals 45 and 46. In Figure 3, trailing edge 46 is shown in phantom line beneath the bead 8. Applicants submit that these amendments are based on the original specification, and in particular paragraph [0057] and

5 claim 2 as originally filed.

Applicants have also added arrow 3 to Figure 2, to denote the advance direction of the conduit. The advance direction is used as a reference from which the “leading” and “trailing” edges are defined. It is clearly described in the specification, and was originally present in Figure 3. Figure 2 shows a longitudinal section of a conduit with an advance direction from right to left.

10 Figure 3 shows an advance direction from left to right because the illustration is viewed from a different perspective. This change of perspective is clarified by the indication of advance direction now added to Figure 2.

Amended claim 1 now more clearly recites a structure where the overlapping portion meets or substantially meets, the trailing edge 46 of said under lapping portion of said ribbon, at

15 the trailing edge of said bead. This is consistent with the claims as originally filed.

Claim 28 has been added and substantially corresponds to the amendment to claim 1 previously submitted on August 21, 2006. Claim 28 recites the “leading *edge* of said over lapping portion meets or substantially meets said under lapping ribbon at the leading edge of said bead.” It is now more clear that the leading edge of the overlapping portion referred to is

20 identified as numeral 45 in amended Figure 2.

The Examiner noted that the claims have been amended to remove the requirement that the ribbon is “sufficiently supple to conform to the contour of the bead”. As a result, the

Examiner alleges that the prior art documents have all of the claimed features and that our previously submitted argument is not commensurate in scope with the claims presented.

Applicants have reintroduced the limitation into amended claim 1 that the tape is sufficiently supple to conform to the bead which was originally found in claim 2 as filed.

5         Applicants submit that the amended claims clarify the structure for which protection is sought and are now commensurate with the previously submitted arguments.

DE 19848172 discloses methods of encapsulating or embedding **solid** reinforcing elements (particularly metal wire) into a joint between overlapping layers of spirally wound conduit. The resulting conduit's lateral reinforcement against crushing is provided by the metal wire, as clearly described at paragraph [0040] which reads:

...the advantage of this is that if the spirally-wound hose 1 gets deformed in a radial direction, the deformation will be reversible to the initial state due to elastic restoration forces.

10         The claimed method of the present application does not teach or disclose wire reinforcement against lateral crushing, as the molten bead in the present invention forms a helical reinforcing rib when it cools. Claim 1 has been further amended to reflect this, with the addition of the requirement that "... said bead when cooled forming a helical reinforcing rib ..." This further clarifies the claimed invention from the cited prior art.

15         Regarding claim 7, the Examiner suggests that "the claims do not recite that the sacrificial layer (of thin plastic) was applied **directly** upon the former". Applicants have amended the claims to clarify this aspect and require direct application of the sacrificial layer to the former. Applicants reiterate the previous argument that the claims clearly require that the **former** both

rotate **and** advance the conduit, in addition to the sacrificial layer being applied directly to the former.

The Examiner has restated that he believes that cellophane is a weldable material despite the Amcor document Applicants provided in the previous response, which quite clearly in  
5 Applicants' opinion, says that it is not. On this basis, the Examiner rejected claims 7 and 10.

The Examiner insists that his opinion is supported by Wade, which he claims suggests that cellophane would have melted in the processing and would have therefore welded.  
However, this position is absolutely untenable on the basis of United States Patent No. 2,250,430 to Wade. Wade quite clearly provides a list of materials which are defined as either heat sealable  
10 or **rendered** heat-sealable. Regenerated cellulose (cellophane) is listed only as one of many, and Wade makes no claim as to which category cellophane belongs.

In the Final office action the Examiner states "...one skilled in the art would have understood that cellophane baking materials for cellophane tapes were usually formed from cellulose acetate a synthetic derivative of cellulose, which comes from wood pulp or cotton seeds. As such, there is ample evidence that one skilled in the art would have understood that the cellophane layer in Nash was in fact heat sealable...". The Examiner appears to have overlooked  
15 the fact that he cited Wade to support the assertion that the "plain or unlacquered cellophane tape" of Nash (column 2, line 23) would have welded to itself. Cellophane is NOT cellulose acetate, and Wade does not suggest cellophane is weldable.

20 By his own argument, the Examiner seems to have conceded that cellophane needs to be coated in order to be heat-sealable. Given that Nash is absolutely clear that the layer applied directly to the former is "plain or unlacquered cellophane tape" the rejection is not sustainable.

Applicants submit a Declaration from an expert which unequivocally states the fact that cellophane does not melt or weld to itself. Entry and consideration is requested.

Therefore, Applicants submit that the Examiner's rejection have been overcome.

Withdrawal of the rejections is requested. Allowance is requested.

5 A Petition for a Three-Month Extension of Time has been submitted to extend the date for response up to and including March 28, 2007. A Request for Continued Examination is concurrently submitted herewith to ensure entry of this Amendment and the enclosed Declaration.

In view of the above, Applicants respectfully submit that the claims of the application are  
10 allowable over the rejections of the Examiner. Should the Examiner have any questions regarding this Amendment, the Examiner is invited to contact one of the undersigned attorneys at (312) 704-1890.

Respectfully submitted,

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